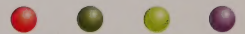


dti

GLOBAL WATCH SERVICE

Annual Report 2003/04

Australasia  
ology • Sustainable  
ndments • Advanced  
online • Information Techn  
ces • North America • Missi  
nering • Energy • Australasia  
ics • Biotechnology • Sustaina  
g • Europe • Secondments • Adva  
nt • Global Watch Service • Informa  
edia • Life Sciences • North America  
acific • Technology Partnering • Ener  
nunications • Electronics • Biotechno  
ance Engineering • Europe • Second  
tion • Environment • Global Watch O  
ologies • Digital Media • **Global Watch Service**  
ents • Advanced Materials • Asia Paci  
ne • Information Technology • Com  
ne • North America • Missions • Per  
au • Energy • Australasia • Inform  
ne • Information Technology • Sustaina  
g • Europe • Secondments • Adv  
ent • Global Watch Service • Informa  
edia • Life Sciences • North Ame  
acific • Technology Partnering •  
unication • Electronics • Bio  
ance Engineering • Europe



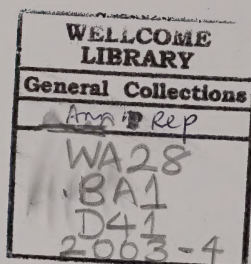


The DTI drives our ambition of 'prosperity for all' by working to create the best environment for business success in the UK.

We help people and companies become more productive by promoting enterprise, innovation and creativity.

We champion UK business at home and abroad. We invest heavily in world-class science and technology.

We protect the rights of working people and consumers. And we stand up for fair and open markets in the UK, Europe and the world.



22501025459

# FOREWORD



The Innovation Report '*Competing in the global economy: the innovation challenge*' which DTI published in December 2003, spelled out the key importance for UK business of engaging with markets,

partners and technologies from other countries around the world.

This first Annual Report from the DTI's Global Watch Service describes how we are helping firms of all sizes to interact with global partners and develop capabilities that will significantly improve their productivity and competitiveness.

Behind the bland statistics lie many stories of British firms deciding for themselves that there are new ways of doing things, new markets to be won, new partnerships to be built. Our monthly magazine '*Global Watch*' gives regular insights into these stories.

But there is much more to be done. We are only tapping into a small fraction of the global capability that exists and that UK firms can use to gain competitive advantage.

That is why, in the Innovation Report, we announced various measures to improve the way we will help business. Most obviously, there will be up to six new International Technology Promoters, in addition to the

existing 16; and we will double the number of secondments of industrialists who can work in an overseas firm for up to a year. Independent studies show that these secondments are extremely cost-effective in helping British firms to improve their productivity when the secondees return.

We also plan to increase our technology missions which have proved so successful in giving that vital international insight on innovation to UK companies.

I do hope that you will take time to read this report and study its implications for your business. There is a great deal of support available – much of it free – to help you consider whether you can benefit from overseas technologies and to take follow-up action. I would particularly commend the International Technology Promoters: highly experienced business-people who can give you first hand help to understand how new technologies can revolutionise your business.

In our rapidly changing global economy we have to move fast to stay at the leading edge of scientific and technological developments. The Global Watch Service is one way of helping you to do that.

A handwritten signature in blue ink, which appears to read 'David B.' followed by a stylized flourish.

**Lord Sainsbury**  
Minister for Science and Innovation



The DTI's Global Watch Service provides support dedicated to helping UK businesses improve their competitiveness by identifying and accessing innovative technologies and practices from overseas.

### **Global Watch Information**

**Global Watch Online** – a unique internet-enabled service delivering immediate and innovative support to UK companies in the form of fast-breaking worldwide business and technology information. The website provides unique coverage of DTI, European and international research plus business initiatives, collaborative programmes and funding sources.

**Visit:** [www.globalwatchonline.com](http://www.globalwatchonline.com)

**Global Watch magazine** – the website's sister publication, featuring innovation in action. Distributed free to over 20,000 UK organisations, this monthly magazine features the latest technology developments and practices gleaned from Global Watch Service activities around the world now being put into practice for profit by British businesses.

**Contact:**  
[subscriptions@globalwatchonline.com](mailto:subscriptions@globalwatchonline.com)

**UKWatch magazine** – a quarterly magazine, published jointly by science and technology groups of the UK Government. Highlighting UK innovation and promoting inward investment opportunities into the UK, the publication is available free of charge to UK and overseas subscribers.

**Contact:** [subscriptions@ukwatchonline.com](mailto:subscriptions@ukwatchonline.com)

**Global Watch Missions** – enabling teams of UK experts to investigate innovation and its implementation at first hand. The technology

focused missions allow UK sectors and individual organisations to gain international insights to guide their own strategies for success.

**Contact:** [missions@globalwatchonline.com](mailto:missions@globalwatchonline.com)

**Global Watch Secondments** – helping small and medium sized companies to send employees abroad or receive key people from another country. Secondments are an effective way of acquiring the knowledge, skills, technology and connections essential to developing a business strategically.

**Contact:**  
[secondments@globalwatchonline.com](mailto:secondments@globalwatchonline.com)

**Global Watch Technology Partnering** – providing free, flexible and direct assistance from international technology specialists to raise awareness of, and provide access to, technology and collaborative opportunities overseas. Delivered to UK companies by a network of 16 International Technology Promoters, with some 6,000 current contacts, providing support ranging from information and referrals to more in-depth assistance with licensing arrangements and technology transfer.

**Contact:** [itp@globalwatchonline.com](mailto:itp@globalwatchonline.com)

For further information on the Global Watch Service please visit

[www.globalwatchonline.com](http://www.globalwatchonline.com)

# Taking up the challenge of global innovation

## CONTENTS

	Foreword	1
	Executive Summary	4
1	Introduction	6
2	Review of the year 2003/04	7
	2.1 Global Watch Information	9
	2.2 Global Watch Missions	14
	2.3 Global Watch Secondments	17
	2.4 Global Watch Technology Partnering	20
3	Plans for 2004/05	27
4	Contacts	31

# EXECUTIVE SUMMARY

The launch in December 2003 of the DTI Innovation Report marked a significant point in the evolution of UK Government's approach to the challenge faced by companies competing in a global economy. The Prime Minister went on record to say that the government wants the UK to be a key knowledge hub in the global economy, and the Innovation Report sets out the steps necessary to achieve that vision.

In practice, this involves helping UK companies to be successful, not just in international trade, but in understanding and accessing technologies and technology partners from other countries that can add to their competitiveness. The DTI Global Watch Service (formerly known as the International Technology Service) is an essential part of this process, offering assistance for those UK-based firms who wish to acquire knowledge of scientific advances, technological developments and the enhanced skills to support their global business development.

During 2003/04 the DTI Global Watch Service assisted UK firms through the provision of:

- **Global Watch Information** consisting of:
  - *Global Watch Online* – a website using state-of-the art technology to deliver targeted information on science and technology developments from around the world directly to the desktops of 2,600 registered users
  - *Global Watch magazine* which is distributed to over 20,000 readers each month in order to raise awareness of the global science and technology agenda

- **Global Watch Missions** which enabled 160 UK companies, intermediaries and academics to visit 12 countries through 21 highly focused visits covering a wide range of emerging technologies
- **Global Watch Secondment** opportunities covering 15 countries and resulting in 20 outward and 14 inward secondees being placed in hi-tech industries
- **Global Watch Technology Partnering** activities undertaken by a network of 16 International Technology Promoters (ITPs) who together facilitated over 1,000 face-to-face meetings between UK firms and validated overseas contacts with the potential to collaborate on innovation issues

The Service was brought to the attention of the UK client base and wider stakeholder community through promotional activities which reached over 200,000 targeted individuals and included numerous UK seminars and conferences attracting, in total, over 5,000 delegates.

By offering this range of support under the single banner of the DTI Global Watch Service, and by highlighting the UK's innovation capability to the wider world through the UKWatch magazine, many of the barriers to globalised innovation are lowered, or even removed. Indeed, an independent evaluation survey of the impact of the Global Watch Service has concluded that participating client companies are innovative firms who exhibit very high levels of satisfaction and achieve significant and attributable benefits, many of which are expected to be realised in the longer term.



This high level of success achieved by the DTI Global Watch Service in 2003/04 will be enhanced in the next year through:

- continual improvements to the Global Watch Online website
- a 50% increase in the circulation of the Global Watch magazine
- an increase in the number of Global Watch Missions to 30
- the number of Global Watch Secondments being doubled
- an expansion of the highly effective ITP network from 16 to 22 international technology transfer specialists
- a targeted, regionally focused, promotional campaign in concert with regional players
- the provision of several large-scale national events in the key technology areas of life sciences, performance engineering, information and communication technologies, and environment and sustainable energy technologies

These activities will continue to be delivered, where appropriate, in collaboration with stakeholders across government including the Foreign and Commonwealth Office (FCO) Science and Technology Network, UK Trade & Investment (UKTI), the DTI Business Group and Office of Science and Technology, Regional Development Agencies (RDAs) and Devolved Administrations, the Research Councils and the British Council.

In particular, and working through our contractors, Pera Innovation, we aim to strengthen our partnerships with complementary government and private sector organisations and services such as the Faraday Partnerships, the Knowledge Transfer Partnerships product, the UKTI Global Partnerships and Global Entrepreneurs Programmes, the Renewables UK Trade Promotion service, appropriate trade associations and professional institutions. By doing so, the DTI Global Watch Service will continue to deliver a high-quality offering to our expanding UK customer base as they face the challenge of innovating and competing in the global economy.

# 1 INTRODUCTION

For many years, DTI, through its International Technology Service, has promoted the need for UK businesses to look overseas for technological innovation on the basis that approximately 95% of the world's R&D takes place outside the UK. This same thinking lies behind the range of support that for the past year has been delivered as the DTI Global Watch Service.

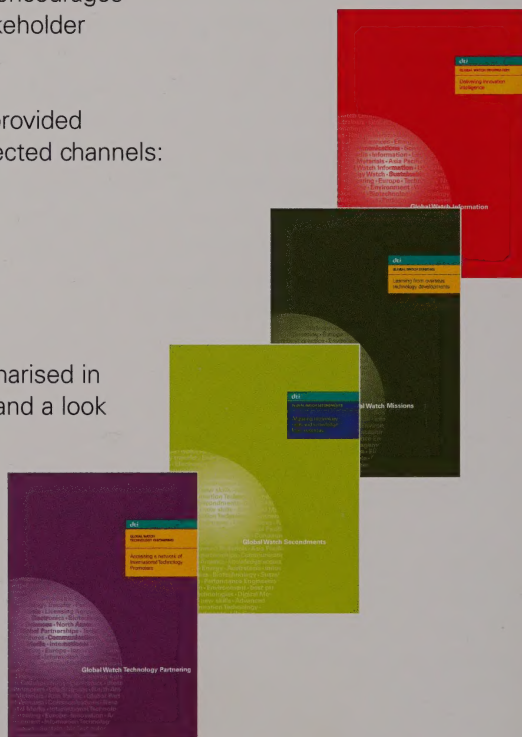
The Global Watch Service allows UK-based firms to acquire knowledge of scientific advances, technological developments and the enhanced skills to support their global business opportunities. The range of support is mainly managed for the DTI by Pera Innovation under a contract which encourages high quality delivery to UK participants and stakeholder organisations.

During 2003/04 the DTI Global Watch Service provided assistance under four distinct but closely-connected channels:

- Information Service
- Technology Missions
- International Secondments
- Technology Partnering

Details of each of these components are summarised in this report along with some brief case studies and a look ahead to future developments.

Many of these developments have been influenced by extensive reviews of the Global Watch Service and its operation carried out throughout the year. These include an independent impact assessment survey conducted by Benchmark Research Ltd, and other studies aligned to the DTI Innovation Report ([www.dti.gov.uk/innovationreport/](http://www.dti.gov.uk/innovationreport/)) and the development of the DTI Technology Strategy.





## 2 REVIEW OF THE YEAR 2003/04

The following sections provide a brief summary of each element of the DTI Global Watch Service and serve to highlight some of the key successes from the past year. The results include material drawn from an independent impact assessment survey carried out by Benchmark Research Ltd on behalf of the DTI. The survey concluded that the Global Watch Service is delivering significant and lasting benefits across its client base.

The Benchmark Research survey confirmed that the Global Watch Service continued to provide assistance across a wide range of UK organisations, but had most impact in the manufacturing and biotechnology sectors. Companies of all sizes were served by one or more of the component parts of the Service. The overwhelming majority of users were innovative firms looking to introduce either new products or new processes to market.

In terms of general benefits, the impact assessment exercise summarised the following:

- all channels of the Service are viewed as delivering an array of technology and related benefits
- significant benefits arise from involvement in the Service
- very little dissatisfaction exists, with the majority of users likely to use the Service in the future
- in terms of impact on harder business measures, each of the components are recognised as delivering attributable benefits
- new users expect to achieve a range of objectives via the Service
- many new users also expect measurable returns in terms of harder economic measures

*'92% of Global Watch Service clients had carried out R&D in the past three years'*

**Benchmark Research Ltd**

*'...Global Watch Service is delivering significant and lasting benefits across its client base'*

**Benchmark Research Ltd**

*'... Global Watch clients are innovators that invest in R&D and are strongly technology focused.'*

**Benchmark Research Ltd**

Over the course of 2003/04 the Global Watch Service was successfully promoted on a regional, national and international scale to companies, intermediaries, academic institutions and other stakeholders. The media were also targeted; in particular, specialist, professional, trade magazines and associated websites have promoted elements of the Global Watch Service in news items and editorial features.

In addition to the collaborative activities undertaken with FCO, UKTI, RDAs and Faraday Partnerships, for example, direct promotion of the Global Watch Service reached a target audience of 165,000 individuals in the year through mailshots of marketing material, promotional literature and attendance at events. This figure rises to over 200,000 people when recipients of the Global Watch and UKWatch magazines are included.

The Global Watch Service has organised a number of high profile events, providing opportunities to promote the Service. For example, *Russian High Technology Business Days* in June 2003 with 300 delegates, *Stem Cells – Shaping the Future*, a two-day Global Watch Mission seminar in September 2003 attracting 765 delegates and *Engenex 1 – Environmentally Aware Engineering* in March 2004 which attracted over 200 delegates.



*Delegates at Engenex 1, March 2004*

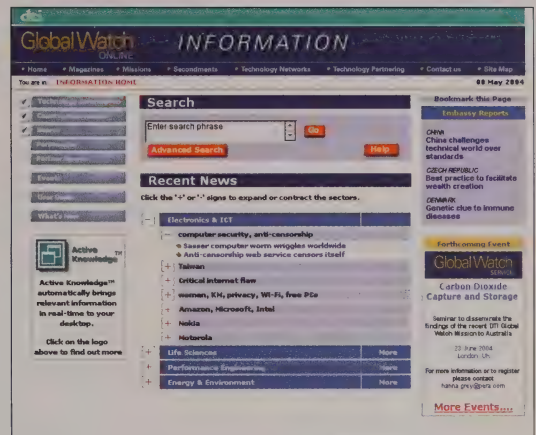
Several of the events were based on bilateral activities with countries of special science and technology interest to the UK. They included the UK-Russia High Technology Working Group and the Asia Pacific Technology Network-facilitated High Technology Industry Fora involving Japan, South Korea and China.

During the year the DTI Global Watch Service developed relationships with regional agencies and intermediaries as a precursor to the launch of a regional promotion plan which commenced at the beginning of 2004, and which will be rolled out further in the coming year.

## 2.1 GLOBAL WATCH INFORMATION

In close collaboration with the Foreign and Commonwealth Office (FCO) Science and Technology Network (STN) operating from UK embassies and consulates around the world, DTI has provided an overseas technology information service for almost 20 years. In 2002, this service was redesigned under the Global Watch banner and 2003/04 was the first full year of a service that comprises:

- Global Watch Online – a unique website providing one-click access to fast-breaking worldwide innovation intelligence, business support and news and events. Global Watch Online connects users to hundreds of the world's best science and technology websites as well as exclusive news and reports generated by FCO science and technology staff
- Global Watch magazine – issued 10 times per year to over 20,000 UK subscribers featuring technology developments overseas
- UKWatch magazine – a quarterly magazine, published jointly by science and technology groups of the UK Government, highlighting UK innovation and promoting inward investment opportunities into the UK

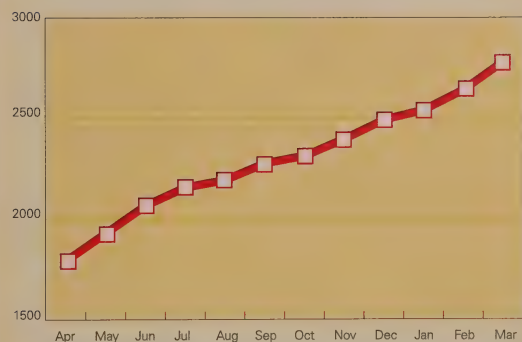


### Global Watch Online

In the past year there have been significant increases in usage and in material being added to the website [www.globalwatchonline.com](http://www.globalwatchonline.com):

- a total of 838 documents (414 reports and 424 news items) received from the Science and Technology Network were added
- the number of UK company profiles recorded for partner searching has expanded by 399 to 1,310, partly due to new UK company profiles sourced via the ITP supported UK Trade & Investment Global Partnerships Service also managed by Pera
- the number of registered users of the site has increased by 922 to 2,600

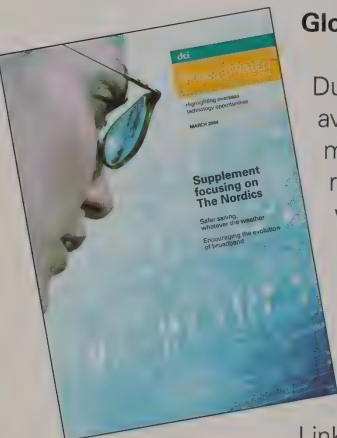
Global Watch Online registered users April 2003 – March 2004





Additionally, the image of the whole site has been transformed with the incorporation of the new DTI branding strip, and consistent reference to Global Watch Service.

In line with the DTI Technology Strategy, and as an expansion of the original Global Watch Online site, work on a Fuel Cells Forum started in June 2003. The Forum is designed to enable the UK science and business community to engage in on-line communications and stay up-to-date with progress on this important emerging technology. The facility was publicly launched at the Eighth Grove Fuel Cell Symposium in September 2003.

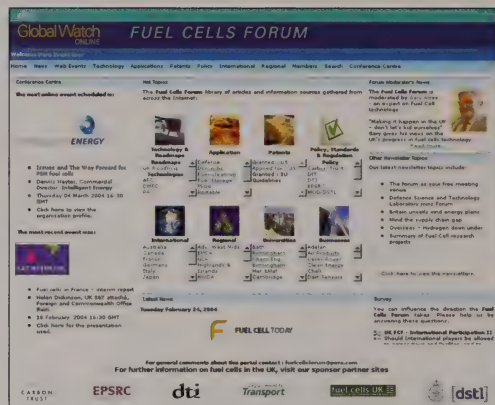


## Global Watch magazine

During the year the circulation has averaged approximately 20,000 per month. Around 60% of Global Watch readers are based in UK businesses, whilst the magazine also reaches out to a wide variety of academics, research and technology organisations, embassies and government offices. It is also welcomed within the community of intermediaries such as Faraday Partnerships, Business Links, Regional Development Agencies

and Devolved Administrations.

Global Watch continues to bring news of overseas ground-breaking technology, innovation and management best practice to UK companies and business intermediaries, encouraging them to be aware of the need to monitor developments that will affect the success of their own or their client companies.



*'What a great little magazine Global Watch is. Bang up-to-date information for British businesses, told in an interesting fashion. And also well-designed and laid out. Congratulations from a new reader!'*

**Rod Hayes**  
Printing World

# GLOBAL WATCH KICK-STARTS KAIKU'S GROWTH STRATEGY



*'The article about our company and technology in Global Watch magazine generated a wide range of outside interest. We had many calls following publication from companies interested in conducting trials of our technology or in collaboration work.'*

**Dr Hassan Amrani,**

Kaiku Ltd

*Dr Hassan Amrani with HRH  
The Duke of York*

A young Manchester company starting to market its novel intelligent electronic pipe technology was featured in Global Watch magazine following participation in a number of Global Watch Service activities which had put it on track to achieve its ambitious targets.

Determined to capitalise on the multi-sector potential of its real-time, in-line, non-invasive fluid analysis system, Kaiku enlisted the help of Global Watch to make its presence felt on the international scene.

The Global Watch connection began when DTI International Technology Promoters began networking with potential collaborators and investors in Europe on Kaiku's behalf. Kaiku then took part in an IntelliMetrics partnering event in Switzerland instigated by Global Watch Technology Partnering, followed by a Global Watch Mission on pharmacogenomics to the US. The company now has a distributor in the Americas, Japan and South Africa, a collaborative R&D

project underway with a number of UK universities, commercial trials by household names in the food and drink sector and complete system sales to multinational groups.

The majority of features within the magazine stem from DTI Global Watch Service activities aimed at facilitating this knowledge transfer. It is a key objective of the magazine to encourage readers to participate in the range of support on offer under the Global Watch Service banner by taking part in a technology mission or secondment, making contact with an ITP, attending a seminar, requesting a mission report, participating in a Eureka project, or accessing the science and technology resources available via [www.globalwatchonline.com](http://www.globalwatchonline.com).

Global Watch magazine changed significantly in appearance during this year as a result of a major review of the layout, style and content, plus the DTI re-branding initiative.

In 2003/04, 10 issues of Global Watch magazine were produced; July/August and December/January being combined issues. There were also periodic supplements that included a mix of geographic and technology specific information on Asia Pacific, Scandinavia and the Nordics, environmental technologies and nanotechnology. Global Watch also reported on a variety of technology developments extending beyond the G8 countries into, for example, the Philippines and Taiwan.

### **UKWatch magazine**

As a result of the success of Global Watch magazine, UKWatch was introduced in April 2003. The UKWatch magazine is jointly funded by DTI, FCO and UK Trade & Investment for the purpose of promoting UK innovation and inward investment opportunities to an overseas audience. This quarterly publication complements Global Watch Service, which focuses primarily on assisting UK companies through an increased awareness of technology developments overseas.





Circulation has increased significantly over the year that it has been available, and currently stands at 15,000. Like Global Watch, its readership is varied and widespread including science and technology staff in embassies, both UK and overseas, and business contacts in the G8 plus 134 other countries. Great interest has been shown from, for example, Singapore, Saudi Arabia, New Zealand, Estonia and Sweden. Many copies are sent directly around the world to be distributed at specific events. October 2003 saw an increase in requests for issue 3 of UKWatch magazine and extra copies were sent to South Africa and the US for use at events to promote UK innovation.

Distribution is via the UK embassies and consulates overseas and by electronic means. Those readers requesting an electronic copy are sent an e-mail alert notifying them that the latest issue of UKWatch is available and can be accessed via a hyperlink in the e-mail at [www.ukwatchonline.com](http://www.ukwatchonline.com).

A recent reader survey confirmed UKWatch as a very readable, high quality publication that is well recognised as an accurate portrayal of the benefits of investing in the UK, and as a spotlight on UK innovation. So much so that the editorial team is inundated with magazine article suggestions from UK companies hoping to promote their innovative products and services.

The magazine's influence is evident by the level of high powered interviewees that are featured; world renowned individuals such as British Airways' Chief Executive Rod Eddington, and Professor Dame Julia Polak – founder and Director of the pioneering Tissue Engineering and Regenerative Medicine Centre at Imperial College, London.

UKWatch carries a supplement with each issue, focusing last year on the biotechnology, environmental, autosport, ICT and space sectors.

*'The web version looks excellent. I will publicise it to our British Council Science Network'*

**Nicole Towler,**  
British Council

*'I Would like to see it expanded, with more content. More links. Just lots more of the same.'*

**David Norrell**  
Qualitronics

*'Could I congratulate you on the second edition of UKWatch. I felt this was very much on target.'*

**William Pedder**  
Chief Executive,  
UKTrade & Investment

## 2.2 GLOBAL WATCH MISSIONS

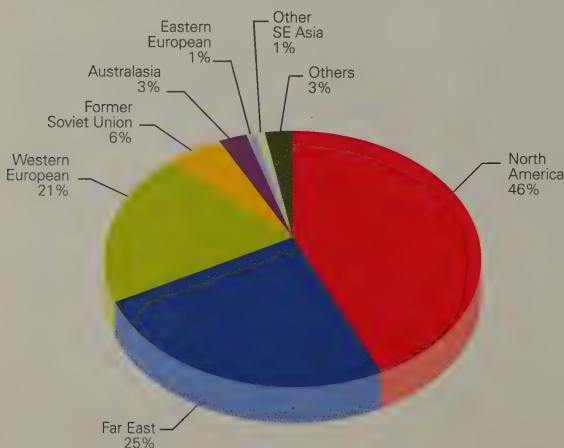
Global Watch Missions provide a unique opportunity to undertake visits overseas to exchange information and gain first-hand knowledge of technology developments and the policies, initiatives and business models underpinning their deployment. By bringing together organisations facing similar challenges and ambitions, missions can also act as a forum for the development of relationships and partnerships with industrial and academic counterparts.

Benefits are realised by entire UK industrial sectors as well as individual organisations, with the knowledge gained and lessons learned resulting in sectoral recommendations and companies capitalising on new ideas and contacts.

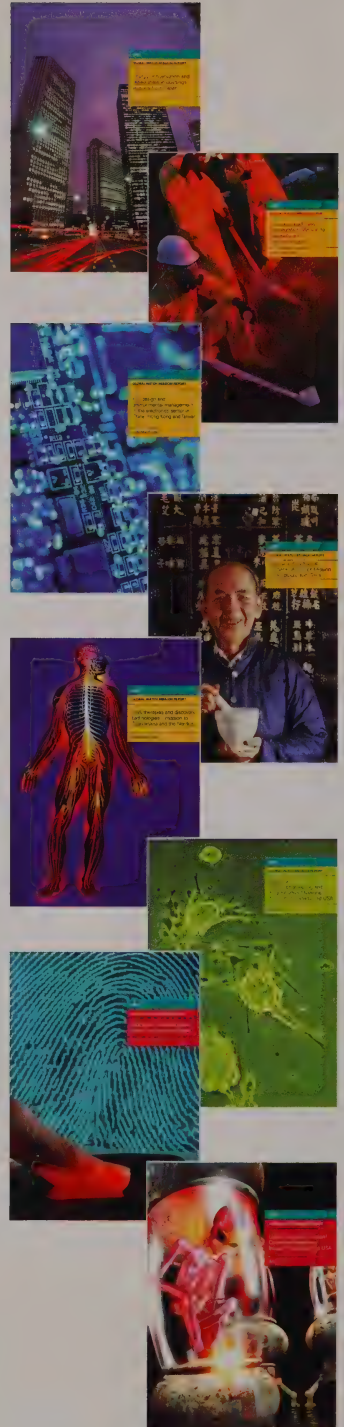
The past year has seen 21 missions approved and deployed in 15 countries across a range of technologies. The operation of the Global Watch Missions programme remains with the DTI's in-house team, but the responsibility for all dissemination activity switched to Pera from April 2003 to enable consistently high quality delivery to UK customers.

Subsequently, 15 mission dissemination events have taken place during the year and corresponding mission reports have been produced and distributed. These events generated a total audience of around 1,000 attendees from the UK science and technology research and business base.

Global Watch Missions – countries visited



*Courtesy of Benchmark Research Limited*



In total, 16 mission reports have been published within the new DTI branding guidelines during the year and distributed directly to over 2,000 readers. In addition, numerous copies of mission reports are downloaded from the Global Watch Online website.

*'88% of mission participants improved their knowledge of a specific technology by taking part in a Global Watch Mission'*

**Benchmark Research Ltd**

## **Mission reports published 1 April 2003 – 31 March 2004**

<b>Date</b>	<b>Report Title</b>	<b>Technology</b>
11/06/03	Creativity is Not Enough: Global Best Practice in Digital Game Publishing	Computer Games: Publishing
30/06/03	The Japanese Approach to Tissue Engineering	Tissue Engineering
15/09/03	Stem Cell, Tissue Engineering and Regenerative Medicine Mission to Canada and US	Stem Cells
23/09/03	Fuel Cells – the US Experience	Fuel Cells
14/11/03	Genetics and Genomics of Sheep and Cattle in Australia and New Zealand	Genetics and Genomics in Ruminant Livestock
18/11/03	Developments in Solar Photovoltaics in Japan	Photovoltaics
09/12/03	Contaminated Land Remediation Mission to Germany and the Netherlands	Contaminated Land Remediation
09/12/03	Lights, Computer, Action! Computer Generated Images Mission to the US	Computer Generated Images
13/01/04	Energy from Biomass – a Mission to Austria and Denmark	Biomass
03/02/04	Electronics and Electronic Materials for Harsh Environments – a Mission to the US	Electronic Materials and Technologies for Harsh Environments
10/02/04	High Throughput Technologies – Industrial Applications and Advances in Germany and Switzerland	High Throughput Technologies
17/02/04	CNS Therapies and Discovery Technologies – Mission to Scandinavia and the Nordics	Central Nervous Systems Therapies
16/03/04	Learning by Seeing Revisited – the Second BPIF Mission to the Printing Industry in California	New Technology in Printing
17/03/04	World Class Supply Chain Relationships for the Packaging Industry – a Mission to the US	Packaging Industry: Supply Chain Relationships
25/03/04	Natural and Traditional Chinese Medicines Mission to Singapore and China	Natural Medicines
25/03/04	Flat Panel Displays in South Korea – Present and Future	Flat Panel Displays



# LIGHTS, COMPUTER, ACTION!



The resurgence of interest in film animation in recent years has been hard to miss. From *Toy Story*, to *The Matrix* to TV commercials, computer-generated images are today's hot ticket. With its innovative reputation in this arena, the UK has a chance to get in on the act, and a DTI Global Watch Mission went to the US, home of the special effects stars, to visit companies such as Pixar and Dreamworks to examine computer generated image technologies used to create films such as *Finding Nemo*.

The mission group, led by DTI International Technology Promoter, Sarah Turner, returned home reeling with the sheer size of

everything. The business is big and booming, facilities are huge – Pixar's server farm houses 3,500 processors – and the team discovered that one organisation alone had 20 people working on sea animation for 12 months.

Yet, despite the apparent 'big is best' basis of the findings, the team is in no doubt that the UK's somewhat smaller companies could still assume an important role in the industry. The mission team's investigations revealed that the strategy lay in specialising in niche products compatible with the US, thus identifying a key point of entry into the US market.

*'One of the key factors for the future will be our ability to keep talent in the UK. We create probably the most gifted talent pool in the world – we hope we have learned from the US about attracting and retaining this talent.'*

**Liam Scanlan,**

The Arts Institute, Bournemouth

## 2.3 GLOBAL WATCH SECONDMENTS

It has long been accepted that looking at leading-edge technologies, ideas and practices from around the world is an important way of identifying how performance can be improved at home. The challenge has always been how to learn from these innovative examples while also competing on a daily basis.

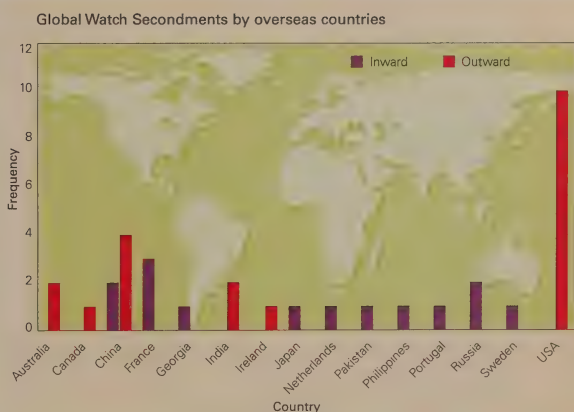
Competitive advantage starts with the continuous surveillance of scientific advances, but it can only be realised with the swift and successful adoption of the most beneficial of these breakthroughs. DTI Global Watch Secondments enable secondees to work in top facilities alongside key people and give companies the best chance of transferring technologies at the right time and in the right way.

In April 2003, the service was broadened to include inbound secondees and the service was re-focused to give all secondments a more clearly defined science or technology transfer objective.

These changes have had the effect of encouraging applications more consistent with the technology and knowledge transfer objectives of Global Watch Secondments. This has resulted in a total of 34 approved secondments in the year, of which 14 were inbound, and these involved companies in 15 separate countries. A further 60 secondments, started in 2002, were completed during the year.

The programme now has in place a strong regional network of advisers working under contract to Pera Innovation through Technology Transfer and Innovation Ltd. This arrangement was introduced to strengthen the links between Global Watch Secondments and the DTI Knowledge Transfer Partnerships product. The regional network is now operating with business support organisations to identify potential secondment opportunities and a more streamlined process for applications. This will lead to the number of secondments being doubled in the following year.

**A Global Watch Secondment is...**  
a project requiring the acquisition of advanced skills and/or knowledge primarily scientific or technological in nature, not readily available in the UK, needed for the development or improvement of a product, process or service by a UK-based SME which has the potential to generate excellent commercial returns.



## Outward Secondments 1 April 2003 – 31 March 2004

Country	Secondment
Australia	Obstetric clinical care
US	Processing, handling, archiving and retrieval of temperature critical clinical and biological methods
US	Digital production techniques
US	WiFi technology in relation to mobile communication technology
China	Renewable energy technologies – specifically small hydropower and solar water heating
US	IT network diagnostics and associated management skills
US	Mobile wireless technologies
US	Design manufacture of high pressure/high temperature flexible pipes for offshore drilling and production industries
Canada	Climatic effects – specifically condensation and moisture penetration of the building envelope
US	Technical requirements of tyre pressure monitoring systems
Republic of Ireland	Sensor micro fabrication and micro instrumentation
Australia	Enhanced Artificial Intelligence imaging in both 2D and 3D
China	Technology to improve refractory products
US	EPICS software for control of synchrotron radiation beamline control equipment
US	New packaging products derived from fibrous waste from sugar cane
US	Push to talk wireless technologies
US	Technology and skills for nuclear decommissioning
China	Virtual Reality technologies for planning processes in architecture

## Inward Secondments 1 April 2003 – 31 March 2004

Country	Secondment
Sweden	Antenna design for marine application
Philippines	Electronic trading system for the construction sector
China	Testing equipment in relation to self propelled inspection tractors for the oil and gas industry pipelines
Portugal	Genetic screening techniques for animals
The Netherlands	Technological enhancements of Heating Ventilation Air Conditioning (HVAC) systems
Japan	Recycling waste electrical and electronic equipment (WEEE)
France	Simulation programmes for machine tool motion
India	Temperature measurement techniques in explosive atmospheres
Russia	Lithium sulphur rechargeable battery technology
France	Multi-point confocal scanning microscopy
Pakistan	Design and installation techniques for multi-element type expansion joints
China	Design of advanced bridge bearing pads and development and enhancement of associated manufacturing techniques
Georgia	Software for digital video broadcasting by satellite



# NALLATECH AIMS TO TURN *DIME* INTO DOLLARS



*'If the secondment achieves its aims, business opportunities worth £5 million could be generated by 2005. The secondment is the most effective mechanism available to help us achieve our growth strategy'.*

**Professor Ian Hunt,**

Vice President and Business Development Director, Nallatech

Breaking into the huge and heavily regulated US defence market is a major challenge for British businesses. But a small Scottish firm is hoping a DTI Global Watch Secondment will help it to develop products for inclusion in the next generation of missile and aircraft-mounted systems.

Nallatech based in Cumbernauld, near Glasgow, is a technology leader in high performance Field Programmable Gate Array (FPGA)-centric systems.

Nallatech's unique DIME architecture combined with FPGA technology provides a flexible hardware platform for highly complex electronics systems, which are used by suppliers of aerospace and defence systems in the US.

Two of Nallatech's senior engineers have been seconded to US companies, Lockheed Martin Corporation (LMC) and General Dynamics, to develop and 'ruggedise' their flexible hardware platform technologies for

use in extreme environments. The UK engineers will also create and train a team of LMC technologists, in addition to taking the new skills and technology home through a programme of training and investment, in preparation for expanding its UK base overseas.

## 2.4 GLOBAL WATCH TECHNOLOGY PARTNERING

This is the generic name which covers the activities of the DTI International Technology Promoters (ITP) network; 16 specialists working with UK firms to facilitate inward technology transfer and broader technology collaboration.

The ITPs provide flexible and direct assistance to raise awareness of, and provide access to, technology and collaborative opportunities overseas. With some 6,000 current contacts, the network provides support ranging from information, referrals and matchmaking, to more in-depth assistance with licensing arrangements and technology transfer agreements. Each ITP has a UK sector or technology focus combined with a responsibility for an overseas territory.

ITPs also instigate specific events, especially bringing together key players from a variety of global industries to meet, network and exchange information with their UK counterparts.

ITP operational activity includes leading Global Watch Missions as well as networking overseas and in the UK. This has resulted over the past year in:

- over 50 international partnership deals being agreed
- in excess of 1,000 international technology partnership meetings being facilitated
- hundreds of examples of UK firms taking positive action with regard to international technology
- some 2,000 new UK contacts being added to the ITP database
- over 100 separate overseas trips taking place, accounting for approximately 25% of available ITP time

The 50 partnering deals recorded in the last year are in addition to many other informal agreements that have been reached. These have been achieved through close collaboration with the wider stakeholder community including, for example, the FCO Science and Technology Network, UKTI and the Faraday Partnerships. Some examples of recent international partnership deals include:



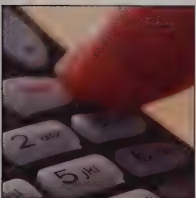
## **Environmental and Sustainable Energy Technologies**

- Working alongside the UKTI trade promotion activities, the ITP network has been instrumental in facilitating deals for UK companies involving both US and Canadian CO<sub>2</sub> capture and storage technologies.
- ITP involvement throughout the negotiation stages has contributed to the establishment of a recycling plant in the UK using technology licensed from Japan.



## **Life Sciences**

- In conjunction with UKTI, an ITP-led delegation visited Biopartner Canada in October 2003, resulting in over 50, one-on-one, doubly validated meetings being held and nine confidential disclosure agreements being exchanged.
- An agreement has been established between a leading UK college and Harvard University to collaborate on tissue engineering programmes. This agreement is a direct result of participation on the ITP-led Global Watch Stem Cell Mission, co-ordinated by SEEDA.
- The ITP network has helped a UK research group to reach an agreement with Beijing Health Authority to work on SARS vaccine. Beijing will provide approximately £500,000 initially and the Medical Research Council will also provide funding. This collaboration is the only official UK/China collaboration on SARS to date.



## **Information, Communications and Electronics Technologies**

- High-level ITP introductions to the Japanese government have resulted in collaborative research, involving a UK academic institution, into the ecodesign of electronic systems.
- Joint promotion by ITP and UKTI of the UK electronics and telecommunication industries at major European exhibitions, including CEBIT, have resulted in a growing number of technology partnership opportunities for UK firms.
- With in-country support from the FCO Science and Technology Network, ITP has facilitated MoU agreements involving the Beijing Technology Exchange Promotion Centre with two UK organisations.





## Performance Engineering

- Further to introductions facilitated by the ITP network, supported in Russia by the FCO, a UK chemicals company has signed a £150,000 contract for research to be carried out by a team of 53 Russian scientists.
- As part of the UKTI-funded Global Partnerships Service, the ITP network was able to assist a US to UK deal involving the application of single-wall carbon nanotubes.
- Working in association with the recently-appointed FCO Science and Technology Officer in Singapore, the ITP network has facilitated a deal involving a small UK company involved in the development of high power lasers for use in semiconductor fabrication.
- Further to a Global Watch Mission co-ordinated by the ADVANCE Faraday Partnership, ITP activity has led to a joint venture between a UK composite materials firm and a German aerospace research centre.

These results make it the most successful period of ITP activity since the network was first piloted in 1996, and the Benchmark Research Survey attributes high satisfaction levels and significant economic benefits to companies assisted by the ITP network.

## Global Partnerships Service

The ITP network also plays a prominent role in delivering the UKTI Global Partnerships Service. This programme was introduced in July 2002 and is designed to find appropriate UK companies interested in joint ventures or other partnership collaborations in response to enquiries originating via the Inward Investment officers in UK embassies and consulates overseas. In November 2003 the service delivered its 100th partnering report to overseas enquirers.

Already, seven UK companies have signed formal partnering agreements and many other cases have been recorded where meaningful dialogue is taking place between inward investors and potential UK partners.

# STRENGTHENING CNS CONNECTIONS WITH SCANDINAVIA



*'The mission allowed me to make some personal contacts with organisations where there is potential for us to work with them. I am now progressing discussions with two large pharmaceutical companies and one start-up – it is so much easier having met the key people and talked to them in depth about what we are doing.'*

**Bruce Holman,**  
Hunter Fleming

The increasing number of older people in the population and significant developments in the diagnosis and measurement of disorders of the central nervous system (CNS) have given rise to expectations that the worldwide market for CNS therapies will reach \$75 billion by 2007. DTI International Technology

Promoter Philip Oliver led a Global Watch Mission to Scandinavia to benchmark and collaborate with its vibrant CNS sector. The mission team returned with findings of Scandinavia's great strength in CNS therapies and discovery technologies underpinned by thriving biotech communities, as well as a willingness to work with

the UK. The resulting dissemination event broadcast these latest developments to 120 international delegates. A significant number of partnering meetings took place demonstrating the commitment of both countries to developing this research further.

Environmental & Sustainable Energy Technologies



**Nicola Smoker**

Chemical, Process and  
Environmental Industries  
Europe

E-mail: [nicki.smoker@pera.com](mailto:nicki.smoker@pera.com)



**David Scott**

Chemicals, Gas, Materials and  
Environmental Industries  
Japan

E-mail: [david.scott@pera.com](mailto:david.scott@pera.com)

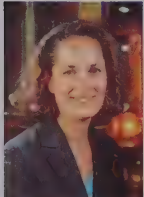


**Philip Sharman**

Sustainable Technologies  
North America

E-mail: [philip.sharman@pera.com](mailto:philip.sharman@pera.com)

Information, Communications & Electronics Technologies



**Sarah Turner**

Digital Media  
North America

E-mail: [sarah.turner@pera.com](mailto:sarah.turner@pera.com)



**David Jack**

Optoelectronics  
North America

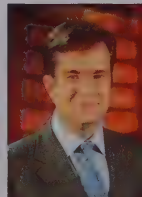
E-mail: [david.jack@pera.com](mailto:david.jack@pera.com)



**Simon Duan**

Electronics and Materials  
China and Asia Pacific

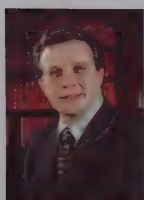
E-mail: [simon.duan@pera.com](mailto:simon.duan@pera.com)



**Ted Ridgway Watt**

Telecommunications  
Europe

E-mail: [ted.ridgway-watt@pera.com](mailto:ted.ridgway-watt@pera.com)



**Phillip White**

Electronics and Communications  
Japan

E-mail: [phillip.white@pera.com](mailto:phillip.white@pera.com)



## Life Sciences



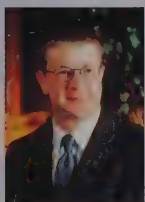
**Andy Sutton**

Biotherapeutics and Stem Cell  
Technologies  
North America  
E-mail: [andy.sutton@pera.com](mailto:andy.sutton@pera.com)



**Pete Kitchin**

Genomics and Medical Diagnostics  
North America  
E-mail: [pete.kitchin@pera.com](mailto:pete.kitchin@pera.com)



**Philip Oliver**

Pharmaceutical/Biotechnology  
Therapeutics  
Europe  
E-mail: [philip.oliver@pera.com](mailto:philip.oliver@pera.com)



**Jiansheng Du**

Life Sciences  
China and Asia Pacific  
E-mail: [jiansheng.du@pera.com](mailto:jiansheng.du@pera.com)

## Performance Engineering



**Cliff Young**

Manufacturing Industries  
North America  
E-mail: [cliff.young@pera.com](mailto:cliff.young@pera.com)



**Juan Matthews**

Advanced Materials and Energy  
Technology  
Russia  
E-mail: [juan.matthews@pera.com](mailto:juan.matthews@pera.com)



**Hong Hai Seeto**

Advanced Manufacturing  
South Korea and Singapore  
E-mail: [hong.hai.seeto@pera.com](mailto:hong.hai.seeto@pera.com)



**Martin Kemp**

Advanced Materials and  
Manufacturing  
Europe  
E-mail: [martin.kemp@pera.com](mailto:martin.kemp@pera.com)

# ANGLO-RUSSIAN HIGH-TECH TRANSFER



*'Without doubt, this is the most significant conference on UK-Russian high-tech collaboration for many years and subsequently two deals have been sealed as a direct consequence of the event.'*

**Lord Sainsbury,**

Minister for Science and Innovation

*Lord Sainsbury greeting Russian Deputy Minister, Vladimir Fridlyanov*

Just a few days before Russian President Vladimir Putin's historic state visit to Britain in June 2003, a brand new Anglo-Russian partnering event was launched which also reflects the rapid development of ties between the two countries. DTI International Technology Promoter Juan Matthews was instrumental in bringing high-tech Russian technologies to the attention of British organisations keen to establish partnerships. The event attracted well over 200 UK and 70 Russian

delegates, showcasing a broad range of ingenious innovations.

Organised by DTI's Global Watch Service, the Russian High Technology Business Days concept is a natural progression to the Anglo-Russian business links that have been steadily building over the last decade – links that have seen Britain become the second largest investor in Russia.

On display was a diverse selection of over 70 original technologies encompassing advanced engineering,

materials, environment and energy technologies, optical and electronic materials and medical and healthcare technologies. While technically brilliant, many of these innovations lacked the marketing sophistication that the West does so well. Not surprisingly, this is considered a key area for collaboration between the two countries which could produce great mutual benefits.

### 3 PLANS FOR 2004/05

The high level of success achieved by all components of the DTI Global Watch Service in 2003/04 will be increased in the next year through targeted improvement plans which will encourage more UK companies to take up the Service.

Specifically, we aim to do the following:

#### Information

- overhaul the Global Watch Online website and improve its usability through compliance with latest accessibility standards
- increase the number of registered users to at least 5,000 – offering simpler registration facilities and through more targeted promotion of the benefits
- use the current website as the basis for the development of new 'Networks of Information' along the lines of the Fuel Cells Forum, and covering emerging technologies such as Advanced Materials and Nanotechnology
- increase the circulation of the Global Watch magazine by 50%, taking it to over 30,000 through a targeted campaign addressing individuals in academia, business and business support organisations





## Missions

- increase the number of Global Watch Missions to 30.  
At 1 April 2004 14 missions had already been approved for 2004/05 including the following;

Mission Name	Country	Coordinating Body
Specialised Bio Processing/Manufacturing	Japan	Pro-Bio Faraday Partnership
Point of Care Diagnostics	US	British In Vitro Diagnostics Association
Hybridmat	Germany & France	Hybridmat
Future of Radio Broadcasting	US	Pera
ICT Cluster and High Tech Start-ups	Malaysia	Coventry University Enterprises
Interactive Smart Materials	Japan	Technitex Faraday
Future Mobiles/Wireless 4G	South Korea	Mobile VCE
Minifabs	Japan	CENAMPS
Structural Genomics	China/Japan	University of Reading
CERN Distributed Systems	Switzerland	Qi3
Fuel Cells	Japan	Synnogy
Food Processing and Testing	North America	Food Processing Faraday
Technology & Delivery Care for the Elderly	Japan	Medilink
Global Navigation Satellite Systems (GNSS) Applications	Japan	Pinpoint Faraday

- disseminate the findings of Missions to a wider audience through more focused event marketing and continual improvements to report quality – reports already planned include:

Date	Report Title	Technology
15/04/03	Integration and Exploitation of Microsystems (MEMS) Sensor Technologies – a Mission to Europe	MEMS Sensor Technologies
20/04/04	Eco-design and Environmental Management in the Electronics Sector in China, Hong Kong and Taiwan	Environmental Management in Electronics
30/04/04	Energy Conservation and Renewables in Buildings – Lessons from Japan	Integrating New and Renewable Energy in Buildings
06/05/04	Biometrics: Identifying the Future – a Mission to Japan	Biometrics

## Secondments

- at least double the total number of secondments
- review demand for inward secondments and increase the proportion as appropriate
- strengthen the regional links between Global Watch Secondments and complementary services such as DTI's Knowledge Transfer Partnerships product

## Technology Partnering

- expand the highly effective ITP network from 16 to 22 international technology transfer specialists
- review the most appropriate territories and technologies for the ITPs to cover through research into existing and potentially new areas

In terms of awareness raising and networking with stakeholders, the Global Watch Service will run a targeted, regionally focused, promotional campaign in concert with regional players. We will also continue to support bilateral international activities such as the UK-Russia High Level Working Group, Britech and the High Technology Industry Fora operated by the Asia Pacific Technology Network.

The overall promotional plan will also allow us to provide several large-scale national events in the key technology areas of life sciences, performance engineering, information and communication technologies, and environment and sustainable energy technologies.



*Delegates at bilateral events*

These activities will continue to be delivered, where appropriate, in collaboration with stakeholders across government including the FCO Science and Technology Network, UK Trade & Investment, the DTI Business Group and Office of Science and Technology, RDAs and Devolved Administrations, the Research Councils and the British Council.

### **Future improvements**

Further to recent reviews of the management of the Global Watch Service, we shall also be looking to build on our success by, amongst other things, implementing a 'roadmap' setting out the general direction and infrastructural improvements necessary to ensure the operational plans for the year are clear and understood by the stakeholders.

In particular, and working through our contractors, Pera Innovation, we aim to strengthen our partnerships with complementary government and private sector organisations and services such as the Faraday Partnerships, FCO, the UKTI Global Partnerships and Global Entrepreneurs Programmes, the Renewables UK Trade Promotion service, appropriate trade associations and professional institutions.

By doing so, the DTI Global Watch Service will continue to deliver a high-quality offering to our expanding UK customer base as they face the challenge of innovating and competing in the global economy.



## 4 CONTACTS

**DTI Global Watch Service**  
**Department of Trade and**  
**Industry**  
**151 Buckingham Palace Road**  
**London**  
**SW1W 9SS**

**Global Watch Service**  
**Frank Rott**  
Head of Global Watch Service  
Tel: 020 7215 1602  
Fax: 020 7215 3601  
E-mail: [frank.rott@dti.gsi.gov.uk](mailto:frank.rott@dti.gsi.gov.uk)

**Christine Mitchell**  
Senior Manager  
Global Watch Service  
Tel: 020 7215 2929  
Fax: 020 7215 3601  
E-mail:  
[christine.mitchell@dti.gsi.gov.uk](mailto:christine.mitchell@dti.gsi.gov.uk)

**Ron Kirby**  
PR Executive  
Tel: 020 7215 4117  
Fax: 020 7215 3601  
E-mail: [ron.kirby@dti.gsi.gov.uk](mailto:ron.kirby@dti.gsi.gov.uk)

**Andy Carter**  
Senior Manager,  
Missions and Secondments  
Tel: 020 7215 1786  
Fax: 020 7215 3601  
E-mail: [andy.carter@dti.gsi.gov.uk](mailto:andy.carter@dti.gsi.gov.uk)

**David Thompson**  
Missions and Secondments  
Manager  
Environmental & Sustainable  
Energy Technologies  
Tel: 020 7215 1859  
Fax: 020 7215 3601  
E-mail:  
[david.thompson@dti.gsi.gov.uk](mailto:david.thompson@dti.gsi.gov.uk)

**Harsha Patel**  
Missions and Secondments  
Manager  
Life Sciences  
Tel: 020 7215 4195  
Fax: 020 7215 3601  
E-mail: [harsha.patel@dti.gsi.gov.uk](mailto:harsha.patel@dti.gsi.gov.uk)

**Farida Isroliwala**  
Missions and Secondments  
Manager  
Electronics & ICT  
Tel: 020 7215 3774  
Fax: 020 7215 3601  
E-mail:  
[farida.isroliwala@dti.gsi.gov.uk](mailto:farida.isroliwala@dti.gsi.gov.uk)

**Craig Wallbank**  
Missions and Secondments  
Manager  
Performance Engineering  
Tel: 020 7215 1968  
Fax: 020 7215 3601  
E-mail:  
[craig.wallbank@dti.gsi.gov.uk](mailto:craig.wallbank@dti.gsi.gov.uk)

**Pera Innovation Limited**  
**Pera Innovation Park**  
**Melton Mowbray**  
**Leicestershire**  
**LE13 0PB**

**Tel: 01664 501551**  
**Fax: 01664 501261**

#### **Global Watch Service**

**Brendan Vickers**  
Programme Director  
E-mail: [brendan.vickers@pera.com](mailto:brendan.vickers@pera.com)

**Tanya Allen**  
Communications Manager  
E-mail: [tanya.allen@pera.com](mailto:tanya.allen@pera.com)

#### **Global Watch Online**

**Graham Dyer**  
Global Watch Online Manager  
E-mail: [graham.dyer@pera.com](mailto:graham.dyer@pera.com)

#### **Magazines**

**Penny Little**  
Copy Editor – Global Watch  
E-mail: [penny.little@pera.com](mailto:penny.little@pera.com)

**Sarah Upton**  
Copy Editor – UKWatch  
E-mail: [sarah.upton@pera.com](mailto:sarah.upton@pera.com)

**Mirelle Ball**  
Subscriptions – Global Watch  
E-mail: [subscriptions@globalwatchonline.com](mailto:subscriptions@globalwatchonline.com)

Subscriptions – UKWatch  
E-mail: [subscriptions@ukwatchonline.com](mailto:subscriptions@ukwatchonline.com)

#### **Global Watch Mission Dissemination**

**David Phillips**  
Events Manager  
E-mail: [david.phillips@pera.com](mailto:david.phillips@pera.com)

#### **Global Watch Secondments**

**Hamish Peters**  
Contracts Manager  
E-mail: [hamish.peters@pera.com](mailto:hamish.peters@pera.com)

**Lorna Davies**  
Global Watch Secondments  
Coordinator  
Technology Transfer & Innovation Ltd  
Brunel House  
Volunteer Way  
Faringdon  
Oxon  
SN7 7YR

Tel: 01367 245210  
Fax: 01367 242831  
E-mail: [secondments@globalwatchonline.com](mailto:secondments@globalwatchonline.com)

#### **Global Watch Technology Partnering**

**Liz Coutts**  
ITP Network Coordinator  
E-mail: [itp@globalwatchonline.com](mailto:itp@globalwatchonline.com)

Printed in the UK on environmentally friendly paper, produced from totally chlorine free bleached pulp, fully recyclable.

First published in May 2004 by Pera Innovation Limited on behalf of the Department of Trade and Industry.

© Crown copyright 2004

URN 04/386



